

Exhibit 3

CONGRESS OF THE UNITED STATES
CONGRESSIONAL BUDGET OFFICE

A
CBO
PAPER

JANUARY 2007

**Prescription Drug
Pricing in the
Private Sector**

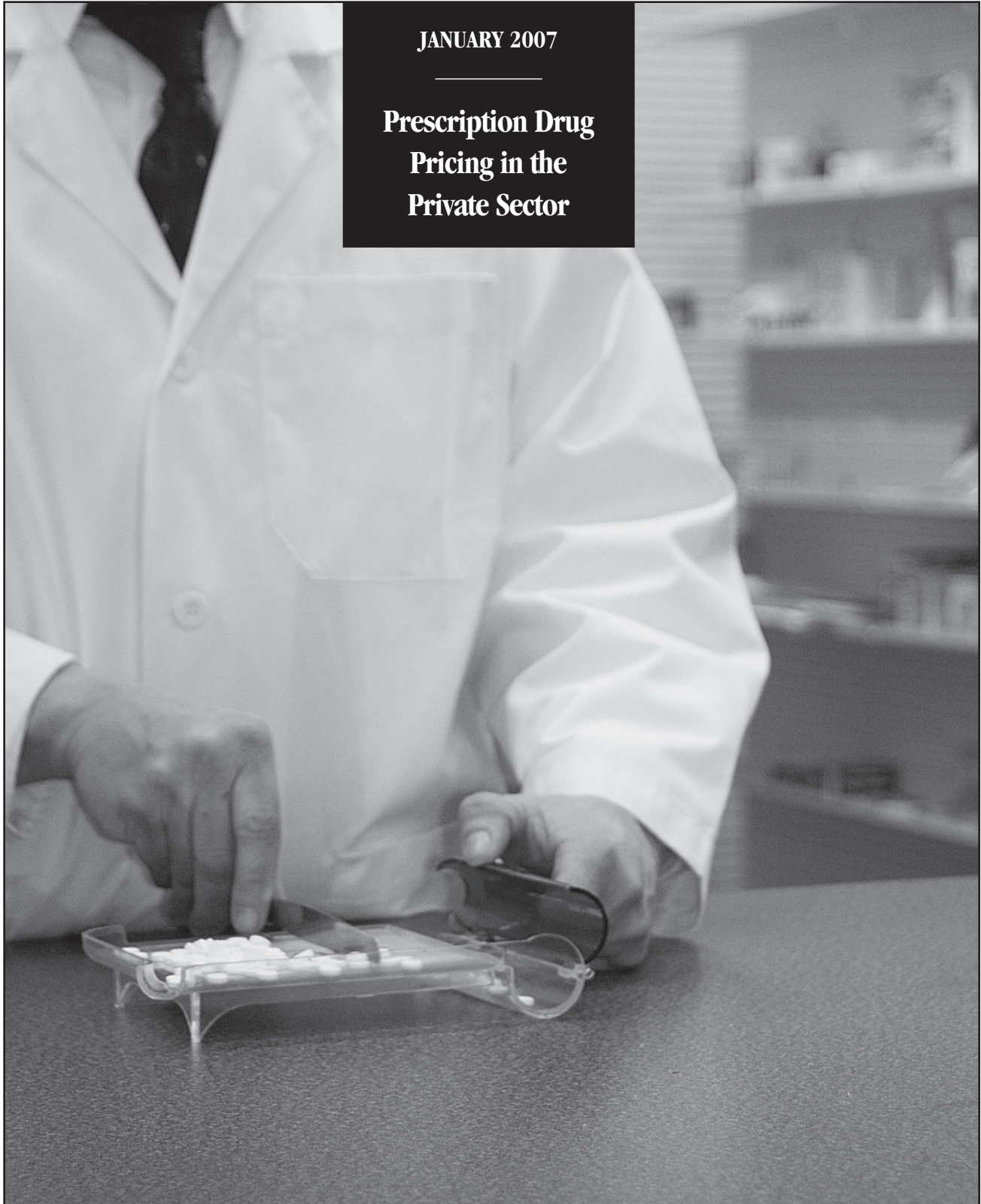


Table 3.**U.S. Sales of Prescription Drugs and Sellers' Market Shares, 1999 and 2005**

	1999		2005	
	Sales (Billions of dollars)	Market Share (Percent)	Sales (Billions of dollars)	Market Share (Percent)
Retail				
Chain Pharmacies	53.6	38.9	88.2	35.0
Mail-Order Pharmacies	13.2	9.6	36.9	14.7
Independent Pharmacies	24.4	17.7	34.4	13.6
Food Stores with Pharmacies	12.7	9.2	21.3	8.5
Subtotal, Retail	103.8	75.4	180.8	71.8
Nonretail				
Nonfederal Hospitals	15.3	11.1	26.0	10.3
Clinics	8.7	6.3	24.8	9.9
Nursing Homes	3.9	2.8	12.0	4.8
Federal Facilities	2.2	1.6	3.6	1.4
Home Health Care Providers	1.5	1.1	2.4	0.9
HMOs	1.6	1.2	1.5	0.6
Miscellaneous Facilities	0.6	0.4	0.8	0.3
Subtotal, Nonretail	33.8	24.6	71.1	28.2
Total U.S. Market	137.7	100.0	251.8	100.0

Source: Congressional Budget office based on data from IMS Health for 1999 and 2005 (the most recent data available); see www.imshealth.com/ims/portal/front/articleC/0,2777,6599_73915261_77141536,00.html.

Note: HMO= health maintenance organization.

obtaining lower net prices. Manufacturers frequently pay rebates directly to purchasers on the basis of the volume of drugs they purchase over a period of time. A demonstrated ability to switch patients to a particular company's drug, evidenced by an increase in the volume sold to a purchaser's customers, may be rewarded with a higher rebate. In that case, the purchaser's net price is the amount paid to the wholesaler minus the rebate. The rebate is an "off-invoice" pricing adjustment; that is, it is not reflected in the wholesaler's invoice price, having been negotiated privately between the manufacturer and the purchaser. Obtaining information about the size of such rebates and which purchasers get them is usually not possible, so most of the prices analyzed by CBO in this paper do not include them.⁸

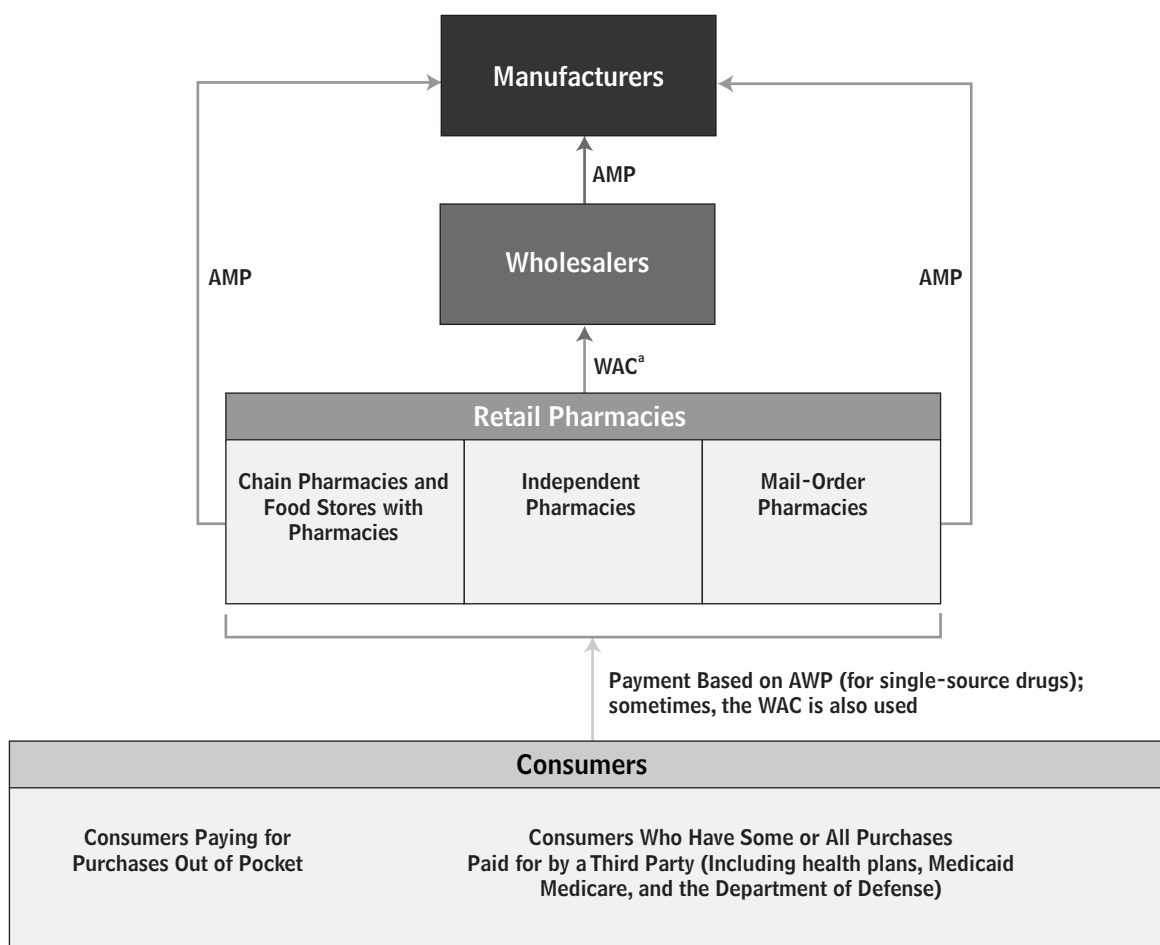
Manufacturers also pay rebates to PBMs working on behalf of health plans. PBMs determine which drugs are therapeutically similar.⁹ Then, for such brand-name drugs with several close substitutes, PBMs negotiate with manufacturers for rebates in return for placing the manufacturers' drugs on their formularies or giving the drugs

preferential placement on their formularies. PBMs can give preferential treatment to manufacturers' drugs by, for example, charging a lower copayment for the preferred drugs than for other (nonpreferred) drugs that are therapeutically similar. The health plans' patients may then have access to only the identified drugs (in what is known as a closed formulary) or may have access to nearly all prescription drugs but at different levels of cost sharing (in what is known as an open formulary).

Generic Drugs. With generic drugs, conventional pharmacies and wholesalers, in addition to nonretail providers

8. For further discussion of pricing in the pharmaceutical industry, see Congressional Budget Office, *How Increased Competition from Generic Drugs Has Affected Prices and Returns in the Pharmaceutical Industry* (July 1998), Chapter 3; and Richard G. Frank, "Prescription Drug Prices: Why Do Some Pay More Than Others Do?" *Health Affairs*, vol. 20, no. 2 (2001), pp. 115–128.

9. A pharmacy and therapeutics committee, made up of physicians and pharmacists, usually determines which drugs within the same therapeutic class are close substitutes.

Figure 3.**Measures of Prices in the Retail Pharmacy Market**

Source: Congressional Budget Office.

Notes: AMP = average manufacturer price; WAC = wholesale acquisition cost; AWP = average wholesale price.

The AMP is an average of actual transaction prices. In contrast, the WAC and the AWP are list prices, like a sticker price in the automobile industry.

The role of the pharmacy benefit managers in the payment process is shown in Figure 4.

- a. The WAC approximates what conventional retail pharmacies pay wholesalers for single-source brand-name drugs. It does not approximate what retail pharmacies pay wholesalers for multiple-source drugs.

and mail-order pharmacies, choose which versions to stock. Consequently, those purchasers are able to negotiate lower prices from manufacturers. Chain pharmacies that purchase large volumes of generic drugs may negotiate lower prices than other purchasers of smaller volumes. PBMs, working on behalf of health plans, do not choose which generic drugs to dispense and so are not in a position to negotiate lower prices with manufacturers.¹⁰

Price Measures

Of the three pricing measures that are important in understanding the payment system for prescription drugs in the retail pharmacy market, only one is an average of actual transaction prices: the average manufacturer price. The other two prices are list prices that are something like the sticker price on a car: the wholesale acquisition cost and the average wholesale price. (See Figure 3.)

10. An exception would be a mail-order pharmacy owned by a PBM.

Box 1.**The Average Manufacturer Price Is to Be Made Publicly Available**

Currently, the average manufacturer price (AMP) for prescription drugs is not publicly available. That situation will change when the Centers for Medicare & Medicaid Services (CMS) publicly posts AMPs for both generic and brand-name drugs, as required under the Deficit Reduction Act, which the agency expects to do late in the spring of 2007.¹ The AMPs are being made publicly available in part to help implement Medicaid's new payment rate for multiple-source drugs, which was changed by the Deficit Reduction Act. That rate will be equal to 250 percent of the lowest AMP among generic drugs and their brand-name counterparts with the same active ingredients, dosage form, and strength. As part of implementing the new payment rate, CMS has issued a proposed rule that includes a new definition of the AMP.²

AMPs do not reflect all pharmacies' acquisition costs because they do not include wholesalers' markups. Further, AMPs are average prices across all retail pharmacy channels and include discounts that may not be available to all pharmacies. Nonetheless, making AMPs public may help inform payments to pharmacies by third-party payers and particularly the upper limits that payers place on payments to pharmacies for multiple-source drugs. Making AMPs publicly available may also enable insurance companies, employers, and cash customers to determine whether they are paying appropriate amounts for particular drugs—thus, overall, bringing greater price transparency to the retail pharmacy market. This additional pricing information could lower what pharmacies and wholesalers are paid for prescription drugs. In addition, to the extent that different pharmacies currently pay different prices for the same prescription drugs, making AMPs public could narrow the range of prices that pharmacies pay.

1. See Centers for Medicare & Medicaid Services, "Medicaid Drug Pricing Regulation Proposed" (fact sheet, December 15, 2006), available at www.cms.hhs.gov/apps/media/fact_sheets.asp.

2. The proposed rule is available at www.cms.hhs.gov/MedicaidGenInfo/downloads/AMP2238P.pdf.

The average manufacturer price is the average price paid by wholesalers to manufacturers or by retail pharmacies that buy directly from manufacturers for drugs distributed through retail pharmacies. It reflects all rebates paid by manufacturers to wholesalers and to retail pharmacies. It does not include rebates paid by manufacturers to PBMs, Medicaid, or to other third-party payers. Manufacturers are required to report the AMP to the Centers for Medicare & Medicaid Services, which uses it to calculate the rebates that the manufacturers are required to pay to state Medicaid programs for sales to beneficiaries.¹¹ Currently, the AMP is confidential, but, as required under the Deficit Reduction Act of 2005, it will be made publicly available by CMS, probably in the spring of 2007 (see Box 1).

The wholesale acquisition cost is a publicly available list price for sales by manufacturers to wholesalers. Manufacturers report the WAC to publications such as Thomson Micromedex's *Red Book* and First DataBank's *Blue Book*.¹² The WAC does not represent actual transaction prices, and it is not, despite its name, what wholesalers pay for drugs. However, for single-source brand-name drugs, the WAC approximates what retail pharmacies pay wholesalers. Perhaps because the WAC is a publicly available price that closely approximates what retail pharmacies pay for drugs, negotiated rebates for brand-name drugs between PBMs and manufacturers are sometimes based on it.¹³

11. The savings from those rebate payments are shared with the federal government.

12. This paper relies on the WAC for drugs reported in Thomson Micromedex's *Red Book*.

13. See Federal Trade Commission, *Pharmacy Benefit Managers*, p. 50.

For generic drugs, the WAC does not approximate what retail pharmacies pay wholesalers. Because third parties' payments to pharmacies for generic drugs are often based on list prices such as the WAC, a manufacturer has an incentive to set a high WAC and increase the spread between what pharmacies pay wholesalers and the payments that the pharmacies receive—thereby encouraging pharmacies to dispense its generic drugs. (While health plans are aware that the WAC greatly exceeds the pharmacies' acquisition costs for generic drugs, they have only limited information on the actual costs.) By contrast, because pharmacies do not choose which single-source drugs to dispense, a manufacturer has little incentive to attempt to increase the spread between what pharmacies pay wholesalers and the payment that pharmacies receive from health plans. Perhaps that is partly why the WAC for single-source drugs closely approximates what retail pharmacies pay wholesalers.

The average wholesale price is a publicly available list price for sales by wholesalers to pharmacies and nonretail providers—again, reported in publications such as Thomson Micromedex's *Red Book* and First DataBank's *Blue Book*. The AWP does not represent actual transaction prices, and it is not, as its name suggests, what wholesalers charge for drugs. According to First DataBank, the AWP data that it publishes are intended to represent an average of wholesalers' list prices. However, a class action lawsuit has been brought against the company alleging that it began relying exclusively on information provided by the wholesaler McKesson as the basis for its published AWP data and did not survey any other wholesalers.¹⁴ This paper relies upon AWP data reported

by Thomson Micromedex, which, according to the company, are reported by manufacturers.

The AWP is often used as a basis for payment to retail pharmacies by, for example, the Medicaid program, PBMs, and health plans. For example, a PBM's or health plan's "typical" payment rate to a pharmacy for a single-source brand-name drug in 2003 was the AWP minus 15 percent plus a \$2 dispensing fee.¹⁵ A PBM's payment rate to a pharmacy for a multiple-source drug can be based on the AWP of all brand-name and generic drugs that are chemically equivalent.

The Roles of Pharmacy Benefit Managers and Pharmacies

PBMs manage pharmacy benefits on behalf of their clients, which include health plans, HMOs, and self-insured employer-based plans. Their primary services include claims administration, reviews of drug utilization, formulary management, and negotiated pricing arrangements with drug manufacturers and the PBMs' network of retail pharmacies.¹⁶ One expert has estimated that the three largest PBMs (Caremark RX, Medco, and Express Scripts) together manage more than one-third of all drug sales in the retail pharmacy market.¹⁷ Pharmacies dispense prescriptions to consumers and perform other services such as checking for drug interactions and proper dosage levels. Pharmacies can also help to administer PBMs' formularies.

Pharmacy Benefit Managers

PBMs play a key role in negotiating the final price that manufacturers and pharmacies receive on a prescription drug sale. Manufacturers set their price to wholesalers and pharmacies with an eye toward the availability of other close substitutes on the market, keeping in mind

14. The lawsuit also alleges that First DataBank and McKesson illegally conspired to increase the spread between what pharmacies pay wholesalers and the reimbursement that pharmacies receive from health plans by increasing AWP's from a standard of 20 percent above WACs to 25 percent above. If a proposed settlement is approved and ordered by the Boston district court, First DataBank will reduce its AWP's to 20 percent above WACs and will discontinue publishing AWP's within two years of the effective date of the final court order. See Kathryn Phelps, "First DataBank AWP Settlement Pressures Pharmacies to Change Payment," *The Pink Sheet*, October 16, 2006, pp. 13–14; Barbara Martinez, "Book Value: How Quiet Moves by a Publisher Sway Billions in Drug Spending," *Wall Street Journal*, October 6, 2006, pp. A1 and A12; and Memorandum from First DataBank to Customers, "AWP Communications Re: First DataBank's *Blue Book* AWP Data," October 5, 2006, available at www.firstdatabank.com/support/rcs/communications/awp/.

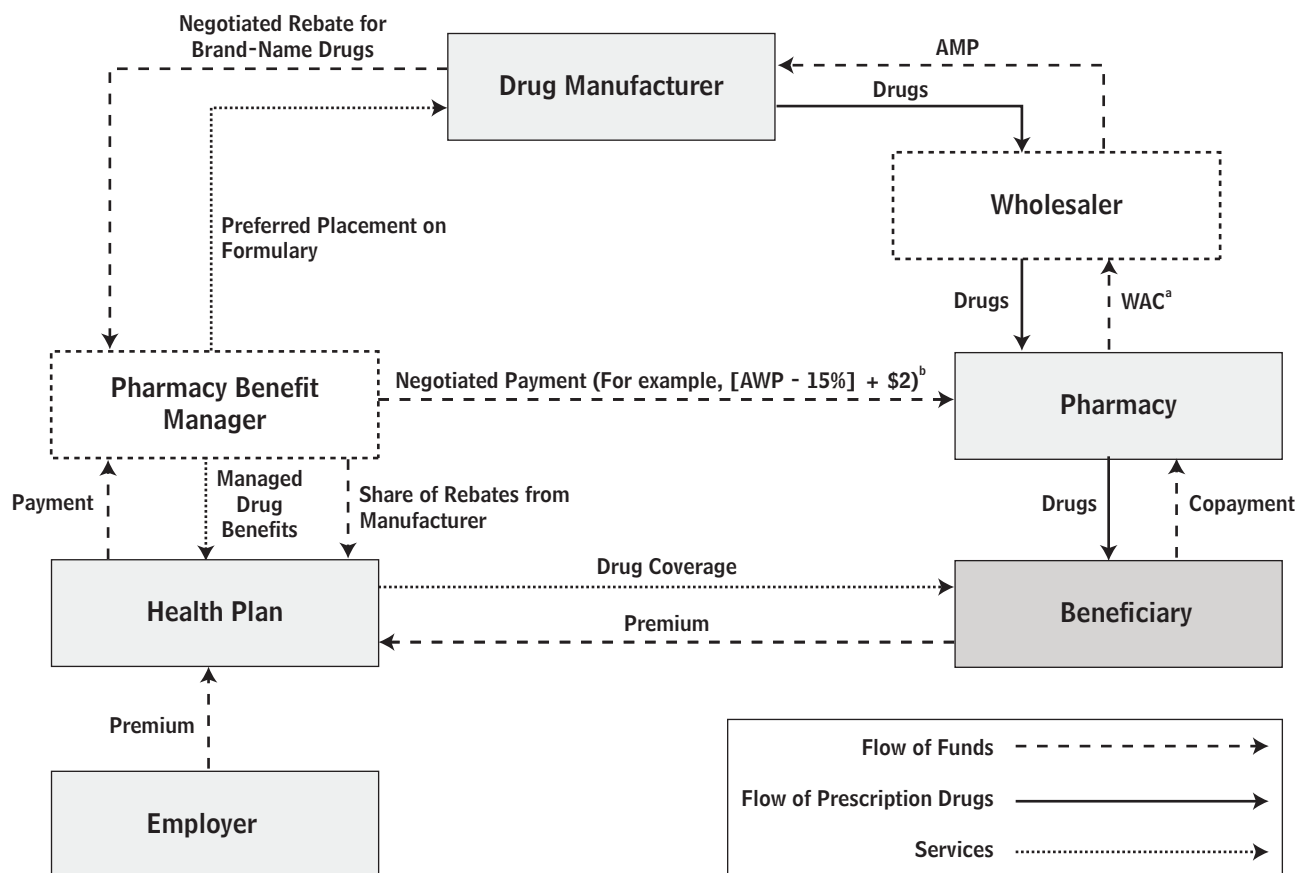
15. See Novartis Pharmaceuticals Corporation, *Pharmacy Benefit Report: Facts & Figures* (2004), p. 16.

16. For more detailed descriptions of how PBMs work, see Kaiser Family Foundation, *The Role of PBMs in Managing Drug Costs: Implications for a Medicare Drug Benefit* (January 2000). See also D. Kreling and others, *Assessment of the Impact of Pharmacy Benefit Managers* (Health Care Financing Administration, National Technical Information Service, Publication No. PB97-103683, September 1996).

17. Robert Atlas, "The Role of PBMs in Implementing the Medicare Prescription Drug Benefit," *Health Affairs*, Web Exclusive, October 28, 2004, pp. W4-504–W4-515.

Figure 4.

Flow of Funds for Single-Source Brand-Name Drugs Purchased at a Retail Pharmacy and Managed by a Pharmacy Benefit Manager for an Employer's Health Plan



Source: Congressional Budget Office.

Note: AMP = average manufacturer price; WAC = wholesale acquisition cost; AWP = average wholesale price.

a. The WAC is a list price that approximates what conventional pharmacies pay wholesalers for single-source brand-name drugs.

b. Based on Novartis Pharmaceuticals Corporation, *Pharmacy Benefit Report: Facts & Figures* (2004), p. 16.

that they will pay rebates to certain types of purchasers, such as a PBM working on behalf of a health plan (see Figure 4).¹⁸ Thus, the price paid by wholesalers and pharmacies that buy directly from the manufacturers is not the final net price received by manufacturers. That final net price received by the manufacturer is the AMP minus any rebates paid to the PBM.

The formulary is one of the main cost-containment mechanisms used by a PBM. How much copayments are, whether or not all drugs are covered, and how much more beneficiaries must pay for nonpreferred drugs are determined in discussions between the PBM and the health plan or employer. Other contractual mechanisms that affect the cost of the drug benefit include the share of rebates that the health plan will receive, the size of any administrative fee paid to the PBM, and the price that

18. Other types of purchasers that get rebate payments include Medicaid; health plans that internalize the PBM function; and nonretail providers, including hospitals, HMOs, and clinics.

the health plan will pay for prescription drugs (which can differ from what the PBM pays the pharmacy).¹⁹

In negotiating with a manufacturer, the PBM has the greatest leverage for brand-name drugs with close substitutes available on the market. Rebates by the manufacturer can come in two forms: formulary payments, which are in exchange for favorable placement on a formulary, and market-share payments, which are based on the market share that the manufacturer's drug receives relative to its close competitors. The type and size of rebates can vary over a product's life. For example, market-share payments are usually not provided for a new breakthrough drug. And formulary payments are very small or perhaps nonexistent for such a drug because there are no alternatives on the market. As other similar drugs are introduced on the market, the manufacturer may start to negotiate formulary and market-share payments. The manufacturer will usually stop making rebate payments to the PBM once a generic drug becomes available.²⁰

Manufacturers also make other types of payments to PBMs in addition to rebate payments. For example, manufacturers commonly pay a fee to PBMs for the service of administering formularies. Such fees are frequently equal to about 3 percent of wholesale list prices. Other types of payments cover programs such as ones promoting the use of one therapeutically similar drug over another.²¹

Pharmacies

Pharmacies do not have much leverage to negotiate with manufacturers for discounts on single-source brand-name drugs.²² Pharmacies stock a wide range of single-source

drugs so that they are prepared to immediately fill most prescriptions on demand. However, they do have leverage to negotiate with manufacturers for discounts on multiple-source drugs because they can choose which manufacturers' drugs to stock and dispense. When the beneficiary of a health plan managed by a PBM goes to a pharmacy to purchase a drug and presents his or her card associated with the plan, the pharmacist can process the claim immediately using technology that determines whether the drug is on the PBM's formulary, whether it is a preferred brand-name drug, and what the copayment is. In those ways, the pharmacist administers the PBM's formulary—along with performing other services such as checking for drug interactions and proper dosage. Yet even when the pharmacist helps to administer the formulary, any rebate payment for a single-source drug goes to the PBM (or health plan), not the pharmacy.

PBMs' Negotiated Payments to Pharmacies. PBMs negotiate with pharmacies over payments for prescription drugs purchased by the associated health plans' patients. Those negotiated payments have two separate components: reimbursements for the drugs and payments for the dispensing service. The component composed of reimbursements by PBMs and third-party payers such as Medicaid for the cost of the single-source brand-name drugs is usually determined using a formula based on the AWP.²³ Pharmacies may be willing to accept lower total payments in exchange for the greater volume of sales that can come from joining PBMs' pharmacy networks.

Mail-Order Pharmacies. The majority of mail-order pharmacies are owned by PBMs, and a number of large chain pharmacies also own mail-order pharmacies.²⁴ Mail-order pharmacies may have lower dispensing costs than conventional pharmacies do and, when working on behalf of PBMs or health plans, can help to improve compliance with formularies. In the mail-order setting, the pharmacist has more time to contact a physician and attempt to obtain permission to switch a prescription from a drug not on the formulary to a less expensive drug that is on the formulary. Furthermore, a large share of

19. Some contracts vary the rebate share—for example, the more controls in the benefit (in terms of increasing the cost sharing for non-preferred drugs and limiting the formulary to fewer drugs), the larger the share of rebate payments the health plan is likely to obtain. For more details, see Federal Trade Commission, *Pharmacy Benefit Managers*, pp. 57–60.

20. See Federal Trade Commission, *Pharmacy Benefit Managers*, pp. 50–55.

21. See Federal Trade Commission, *Pharmacy Benefit Managers*, pp. 55–56.

22. Pharmacies do not benefit from the rebates that manufacturers give to PBMs. At the same time, pharmacies that do a better job of dispensing generic drugs when those drugs provide an alternative to brand-name drugs and promoting compliance with PBMs' formularies may obtain more favorable payment rates from the PBMs.

23. Payment rates for multiple-source drugs are a bit more complicated—though they also involve a payment for ingredient costs and a dispensing fee. Those rates are explained below.

24. See The Health Strategies Consultancy LLC, "Follow the Pill: Understanding the U.S. Commercial Pharmaceutical Supply Chain" (prepared for the Kaiser Family Foundation, March 2005), p. 13.